mouse producing fully human IgG2 antibodies specific for a desired antigen when immunized with said desired antigen.

3
~~48~~. The transgenic mouse ~~and progeny~~ according to claim 1 ~~46~~, wherein all of the somatic and germ cells comprise the human DNA contained in the yH1C YAC having ATCC accession no. 74367.

4
~~49~~. The transgenic mouse ~~and progeny~~ according to claim 2 ~~47~~, wherein all of the somatic and germ cells comprise the human DNA contained in the yH1C YAC having ATCC accession no. 74367.

5
~~50~~. The transgenic mouse ~~and progeny~~ according to claim 3 ~~47~~, wherein said fragment of human chromosome 2 extends from the three most proximal Vκ gene segments, continuing through the Jκ and Cκ gene segments, through the human kappa deleting element.

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6
~~51~~. The transgenic mouse ~~and progeny~~ according to claim 4 ~~49~~, wherein said fragment of human chromosome 2 extends from the three most proximal Vκ gene segments, continuing through the Jκ and Cκ gene segments, through the human kappa deleting element.

7
~~52~~. The transgenic mouse ~~and progeny~~ according to any one of claims 1-6 ~~46-51~~, wherein all of the somatic and germ cells further comprise:

a) inactivated endogenous immunoglobulin heavy chain loci in which all of the J segment genes are deleted to prevent rearrangement and to prevent formation of a transcript of a rearranged locus and the expression of an endogenous immunoglobulin heavy chain; and

b) inactivated endogenous immunoglobulin light chain loci in which the Cκ gene is deleted to prevent ~~rearrangement and to prevent formation of a transcript of a rearranged locus and the~~ expression of an endogenous immunoglobulin light chain;

wherein said transgenic mouse and progeny lack expression of endogenous immunoglobulin heavy chains.

53. A transgenic mouse and progeny, wherein all of the somatic and germ cells comprise a portion of an unrearranged human immunoglobulin heavy chain locus and a portion of an unrearranged human immunoglobulin kappa light chain locus, wherein said transgenic animal when immunized with a desired antigen produces high affinity fully human IgG antibodies specific for said desired antigen, said high affinity antibodies being characterized by dissociation constants (K_d) of 2×10^{-9} or less.

54. The transgenic mouse and progeny according to claim 53, wherein the high affinity fully human antibodies specific for a desired antigen are characterized by dissociation constants (K_d) of 10^{-10} or less.

55. The transgenic mouse and progeny according to claim 53 or 54, wherein all of the somatic and germ cells further comprise:

a) inactivated endogenous immunoglobulin heavy chain loci in which all of the J segment genes are deleted to prevent rearrangement and to prevent formation of a transcript of a rearranged locus and the expression of an endogenous immunoglobulin heavy chain; and

b) inactivated endogenous immunoglobulin light chain loci in which the Cκ gene is deleted to prevent rearrangement and to prevent formation of a transcript of a rearranged locus and the expression of an endogenous immunoglobulin light chain;

wherein said transgenic mouse and progeny lack expression of endogenous immunoglobulin heavy chains.

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56. A method for producing a fully human IgG antibody specific for a desired antigen, comprising:

(a) immunizing a transgenic mouse according to any one of claims 46-52 with said desired antigen; and

(b) recovering the antibody .

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57. The method according to claim 56, wherein the desired antigen is selected from the group consisting of: leukocyte markers; histocompatibility antigens; integrins; adhesion molecules; interleukins; interleukin receptors; chemokines; growth factors; growth factor receptors; interferon receptors; immunoglobulins and their receptors; tumor antigens; allergens; viral proteins; toxins; blood factors; enzymes; ganglioside GD3, ganglioside GM2; LMP1, LMP2; eosinophil major basic protein, eosinophil cationic protein; pANCA; Amadori protein; Type IV collagen; glycated lipids; γ-interferon; A7; P-glycoprotein; Fas (AFO-1) and oxidized-LDL.

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58. The method according to claim 56, wherein the desired antigen is human IL-8.

59. A fully human IgG2 antibody specific for human IL-8, comprising a heavy chain with the amino acid sequence